What is claimed is:

1. A method for forming a semiconductor device having a multi-layered structure utilizing a thermally conductive stage for supporting a substrate, said method comprising:

disposing the substrate on the stage;.

adjusting a distance between the stage and the substrate to a first interval so that the substrate has a first temperature by heat transferred from the stage;

forming a first thin film on the substrate at the first temperature;

adjusting the distance between the stage and the substrate from the first interval to a second interval so that the substrate has a second temperature by the heat transferred from the stage; and

forming a second thin film on the first thin film at the second temperature.

2. The method of claim 1, wherein the conductive stage includes lift pins, and wherein the first interval and/or the second interval are adjusted by moving the lift pins when the stage is fixed.

3. The method of claim 1, wherein the conductive stage includes lift pins, and wherein the first interval and/or the second interval are adjusted by moving the stage when the lift pins are fixed.

4. The method of claim 1, wherein the conductive stage includes lift pins, and wherein the first interval and/or the second interval are adjusted by moving the stage and the lift pins cooperatively.

5. The method of claim 1, wherein the first thin film includes a metal oxide.

6. The method of claim 5, wherein the metal oxide includes one selected from the group consisting of aluminum oxide (Al_2O_3), titanium oxide (TiO_2), hafnium oxide (HfO_2), zirconium oxide (ZrO_2), yttrium oxide (Y_2O_3), tantalum oxide (Ta_2O_5), strontium titanate ($SrTiO_3$), barium titanate ($BaTiO_3$), barium strontium titanate ((Ba, Sr)TiO_3), and lead zirconium titanate ((Pb, Zr)TiO_3).

7. The method of claim 1, wherein the second thin film includes a metal oxide.

8. The method of claim 7, wherein the second metal oxide includes one selected from the group consisting of aluminum oxide, titanium oxide, hafnium oxide, zirconium oxide, yttrium oxide, tantalum oxide, strontium titanate, barium titanate, barium strontium titanate, and lead zirconium titanate.

9. The method of claim 1, wherein the first thin film and the second thin film are formed by an atomic layer deposition process or a chemical vapor deposition process, respectively.

10. The method of claim 1, further comprising:

adjusting the distance between the stage and the substrate from the second interval to a third interval so that the substrate has a third temperature by heat transferred from the stage; and

forming a third thin film on the second thin film at the third temperature.

11. The method of claim 10, wherein adjusting the distance and forming a subsequent thin film are performed at least once.

12. A method for forming a capacitor of a semiconductor device comprising:

forming a bottom electrode on a substrate;

disposing the substrate on a thermally conductible stage for supporting the substrate;

adjusting the distance between the stage and the substrate to a first interval so that the substrate has a first temperature by heat transferred from the stage;

forming a first thin film including a first metal oxide on the substrate at the first temperature;

adjusting the distance between the stage and the substrate from the first interval to a second interval so that the substrate has a second temperature by the heat transferred from the stage;

forming a second thin film including a second metal oxide on the first thin film at the second temperature to provide a dielectric film including the first and the second thin films on the bottom electrode; and

forming a top electrode on the dielectric film.

13. The method of claim 12, wherein the conductive stage includes lift pins, and wherein the first interval and/or the second interval are adjusted by moving the lift pins when the stage is fixed, by moving the stage when the lift pins are fixed, or by moving the stage and the lift pins cooperatively.

14. The method of claim 12, wherein the first and second thin films are formed by an atomic layer deposition process or a chemical vapor deposition process.

15. The method of claim 12, wherein the first and second metal oxides independently include one selected from the group consisting of aluminum oxide, titanium oxide, hafnium oxide, zirconium oxide, yttrium oxide, tantalum oxide, strontium titanate, barium titanate, barium strontium titanate, and lead zirconium titanate.

16. A method for forming a gate insulation film of a semiconductor device comprising:

disposing a substrate on a thermally conductible stage for supporting the substrate;

adjusting a distance between the stage and the substrate to a first interval so that the substrate has a first temperature by heat transferred from the stage;

forming a first thin film including a first metal oxide on the substrate at the first temperature;

adjusting the distance between the stage and the substrate from the first interval to a second interval so that the substrate has a second temperature by the heat transferred from the stage; and

forming a second thin film including a second metal oxide on the first thin film at the second temperature.

17. The method of claim 16, wherein the conductive stage includes lift pins, and wherein the first interval and/or the second interval are adjusted by moving the lift pins when the stage is fixed, by moving the stage when the lift pins are fixed, or by cooperatively moving the stage and the lift pins.

18. The method of claim 16, wherein the first and the second thin films are formed by an atomic layer deposition process or a chemical vapor deposition process.

19. The method of claim 16, wherein the first metal oxide and the second metal oxide include one selected from the group consisting of aluminum oxide, titanium oxide, hafnium oxide, zirconium oxide, yttrium oxide, tantalum oxide, strontium titanate, barium titanate, barium strontium titanate, and lead zirconium titanate.